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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,302	05/25/2006	Roland Heckenthaler	06721/207865Q	4464
27752 7590 06/03/2011 THE PROCTER & GAMBLE COMPANY Global Legal Department - IP Sycamore Building - 4th Floor 299 East Sixth Street CINCINNATI, OH 45202				
EXAMINER				
HINZE, LEO T				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/554,302

Applicant(s)

HECKENTHALER ET AL.

Examiner

LEO HINZE

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4, 7, 8, 10-14, 17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 7, 8, 10-14, 17 and 19-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant submitted a document on 28 March 2011 titled "Amendments To The Claims." However, it does not appear that any amendments to the claims were made by Applicant.
2. Applicant's arguments filed 28 March 2011 have been fully considered but they are not persuasive.
 - a. Applicant argues that the claim limitation of, "sensing a characteristic of the work piece surface by means of a sensor, wherein the characteristic is selected from the group consisting of color, roughness, and material type, and transmitting corresponding electronic data signals indicative of the sensed characteristic from the sensor to an electronic evaluation device that subsequently adjusts a heating power of a work piece surface heater based, at least in part, on the sensed characteristic data transmitted from a sensor" is more than a mere automation of a manual activity. The examiner disagrees.

First, the specification is completely void of any description of the type of sensor used, and/or how the characteristics of color, roughness, and material type are sensed. Therefore, one must assume that Applicant intends such sensors to be those well-known in the art, used in a manner well-known in the art to provide the evaluation device with the ability to determine the specific type of article to be heated. The examiner's position is that this is nothing more than an automation of what a human

operator would do to determine the specific object to be heated. Absent any disclosure from Applicant of a novel sensor type or method of determining the enumerated characteristics, this portion of the claim limitation appears to be nothing more than an automation of the manual activity that would be performed by the operator to determine the type of workpiece, such that a predetermined target temperature of the heating device could be set.

Second, the disclosure does describe using a temperature sensor to sense the temperature of a workpiece to ensure that it is heated to a "predetermined temperature" (Specification, p. 7, lines 24-26). This, again, is nothing more than an automation of a manual activity. Absent any disclosure in the specification of another method of determining the predetermined temperature, the predetermined temperature can only have been determined by an operator in an empirical procedure, in which data on each specific type of workpiece to be heated is gathered with the use of a temperature sensor to determine the predetermined heating temperature of each workpiece. This data is then loaded into the claimed evaluation device in a lookup table, in which the type of workpiece determined in the workpiece identification process is cross-referenced with the predetermined temperature of that workpiece, and the heater adjusted accordingly such that the workpiece reaches the predetermined temperature. This is nothing more than an automation of what an operator would do with the teaching of Wickwire, as the operator would be required to determine the type of workpiece and set the predetermined temperature of the heating element.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 7, 8, 10-14 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wickwire Jr., et al., US 2,306,256 (hereinafter Wickwire) in view of Horton, US 3,817,172 A (hereinafter Horton).

a. Regarding claims 1, 14, and 21:

Wickwire teaches a plastic surface printing method comprising: providing a metallic hot-stamping tool with a stamping surface (15, 17, Fig. 1), preheating a surface of a plastic work piece to be printed ("plastic material of the nature hereinbelow set forth, is preheated," p. 1, col. 1, lines 39-40); and moving the stamping surface to press

a carrier foil against a surface of the work piece such that a pigment layer is transferred from the carrier foil onto the work piece ("heated die 15 has brought the stamping medium 19 into contact with the undulated face 10b of the plastic article," p. 2, col. 1, lines 51-55; "platen accommodates itself to varying mean vertical dimensions of the article to be stamped," p. 2, col. 1, lines 3-6), wherein the work piece surface to be printed is preheated to a temperature between 80 °C and 120 °C ("range from 130 °F, upwardly, the upper limit being usually less than 250 °F; p. 2, col. 2, lines 11-12, which corresponds to a temperature range of 54 °C to 121 °C); and wherein the stamping surface is preheated to a temperature ("die holder 17 is heated by its heating element," p. 2, col. 1, lines 45-47); wherein preheating the work piece surface comprises: sensing a characteristic of the work piece surface, wherein the characteristic is selected from the group consisting of color, roughness, and material type (the operator will use her senses to determine the characteristics of the workpiece); and using data indicative of the sensed characteristic in an evaluation device that subsequently adjusts a heating power of the heating device based, at least in part, on the characteristic data (operator will use her senses to determine the characteristics of the workpiece, and subsequently adjust the heating power of the device to properly heat the workpiece to the desired temperature). Wickwire also teaches that a predetermination will be made for the precise temperature required for each part ("upon having its temperature raised to its proper predetermined temperature," p. 2, col. 1, lines 16-17).

Wickwire does not teach a plastic-coated outer stamping surface; and transmitting corresponding electric data signals from a sensor to an electronic

evaluation device that adjusts heating power based on the data transmitted from the sensor. Wickwire is silent as to a recommended temperature of the stamping tool, leaving such a determination to one having ordinary skill in the art.

It has been held that mere automation of a manual activity is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.04(III).

One having ordinary skill in the art would recognize that given a required predetermined preheating temperature for each specific article to be impressed, the following functions are critical to proper preheating of an article to the predetermined temperature: identification of each article or each batch of articles; selection of the proper predetermined preheating temperature for the identified object; and operation of the preheating means at the proper power level for the proper time to achieve preheating of the article to be impressed to the proper temperature. One having ordinary skill in the art would also know that a simple lookup table, for example, could be generated, which table would list each item with a corresponding predetermined preheat temperature, power setting, and preheat time, and further, that an operator would perform identification of the article and evaluation of the proper data from the lookup table to properly operate the preheating apparatus, the identification being based upon the color of an object, the material type of an object, or other physical characteristics of the object that would indicate to the observer the type of object.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Wickwire by automating the identification of the article to be impressed and the subsequent setting and operation of the preheating

mechanism, including the steps of transmitting corresponding electric data signals indicative of the sensed characteristic from a sensor to an electronic evaluation device that subsequently adjusts a heating power of the heating device based, at least in part, on the characteristic data transmitted from a sensor, because such automation would predictably and advantageously achieve the same result as a manual identification process, but with a likely decrease in the time required to perform the steps, as well as an increase in accuracy, which decrease in time and increase in accuracy may serve to increase the overall throughput of the process.

One having ordinary skill in the art would know to look to the prior art to help determine a suitable temperature to which to heat the stamping die, given the lack of specific stamping die temperature in the disclosure of Wickwire.

Horton teaches a metallic hot-stamping tool with a plastic-coated outer stamping surface (2, 1; "the flexible resilient die portion is preferably formed of a high-temperature resistant silicone rubber material," col. 1, ll. 45-47). The rubber surface allows the die to conform to the surface to be printed (col. 1, ll. 19-25). The die is heated to between 200 °C and 220 °C for stamping (col. 3, line 23).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Wickwire to include a plastic-coated outer stamping surface heated to between 200 °C and 220 °C as taught by Horton, because this would predictably allow the die to conform to the surface of the article to be printed.

b. Regarding claim 7, the combination of Wickwire and Horton teaches the method according to claim 1 as discussed in the rejection of claim 1 above. The combination of

Wickwire and Horton also teaches wherein the preheated work piece surface comprises a surface capable of use as a plastic toothbrush (Wickwire: it appears that plastic article 10, Fig. 1, could be capable of use as a toothbrush).

c. Regarding claim 8, the combination of Wickwire and Horton teaches the method according to claim 7 as discussed in the rejection of claim 7 above. The combination of Wickwire and Horton also teaches wherein the work surface consists of a thermoplastic plastic (Wickwire: "vinyl chloride-acetate resins," p. 1, col. 2, line 1).

d. Regarding claim 10, the combination of Wickwire and Horton teaches the method according to claim 1 as discussed in the rejection of claim 1 above. The combination of Wickwire and Horton also teaches wherein the hot-stamping tool is coated with a silicon layer (Horton: "the flexible resilient die portion is preferably formed of a high-temperature resistant silicone rubber material," col. 1, ll. 45-47).

e. Regarding claims 11, 12, and 19, the combination of Wickwire and Horton teaches the method according to claims 10 and 14 as discussed in the rejection of claims 10 and 14 above. The combination of Wickwire and Horton also teaches wherein the silicone layer has a thickness between 2 and 3 mm (Horton: "the die is 0.75 to 3 mm thick," col. 4, l. 25).

f. Regarding claims 13 and 20, the combination of Wickwire and Horton teaches the method according to claims 1 and 14 as discussed in the rejection of claims 1 and 14 above. The combination of Wickwire and Horton also teaches wherein the stamping surface is preheated to a temperature between 200 °C and 220 °C (Horton: col. 3, line 23).

6. Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wickwire in view of Horton as applied to claims 1 and 14 above, and further in view of Colledge, US 3,791,290 A (hereinafter Colledge).

a. Regarding claims 4 and 17:

The combination of Wickwire and Horton teaches the method according to claims 1 and 14 as discussed in the rejection of claims 1 and 14 above.

The combination of Wickwire and Horton does not teach wherein preheating the work piece surface is heated by means of an infrared lamp.

Colledge teaches a heating means for a work piece that is either an electric resistance coil or an infra-red lamp (col. 1, lines 33-34).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to further modify Wickwire to supplement the electric heater with an infrared heater, because Colledge teaches that these are known equivalents, and one having ordinary skill in the art may find more flexibility in using an IR heater that does not need to touch the work piece to heat it.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period **will** expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) **will** be calculated from the mailing date of the advisory action. In no event, however, **will** the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is 571.272.2864. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571.272.2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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01 June 2011

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